

Abstract

The present invention provides novel fluorescent compounds and covalent attachment chemistries which facilitate the use of these compounds as labels for ultrasensitive and quantitative fluorescent detection of low levels of biomolecules. In a preferred embodiment, the fluorescent labels of this invention are novel derivatives of the hydroxy-pyrene trisulphonic and disulphonic acids which may be used in any assay in which radioisotopes, colored dyes or other fluorescent molecules are currently used. Thus, for example, any assay using labeled antibodies, proteins, oligonucleotides or lipids, including fluorescent cell sorting, fluorescence microscopy (including dark-field microscopy), fluorescence polarization assays, ligand, receptor binding assays, receptor activation assays and diagnostic assays can benefit from use of the compounds disclosed herein.